WHAT IS CLAIMED IS:

1. An apparatus for transmitting a waveform reflecting a time-varying magnetic resonance radio frequency signal comprising:

(a) a waveform generator, wherein the waveform generator uses data reflecting the time-varying magnetic resonance radio frequency signal to generate a waveform having a time-varying property; and

(b) a signal transmitter that transmits the waveform having the time-varying property to a magnetic resonance scanner.

2. The apparatus of claim 1, wherein the waveform generator comprises a control device.

3. The apparatus of claim 2, wherein the control device is a computer.

4. The apparatus of claim 1, wherein the waveform generator comprises a base-band or intermediate frequency generator and modulator, or a digital frequency synthesizer.

5. The apparatus of claim 1, wherein the time-varying property is amplitude, frequency, or phase.

6. The apparatus of claim 1, wherein the signal transmitter is an antenna or cable.

7. The apparatus of claim 1, further comprising a magnetic resonance scanner.

8. The apparatus of claim 1, further comprising a keyboard.

9. The apparatus of claim 1, further comprising a monitoring device that records operating parameters of a magnetic resonance scanner or free induction decay signals.

10. The apparatus of claim 9, wherein the monitoring device is a digital or analog signal recorder.

11. An apparatus for transmitting a waveform reflecting a magnetic resonance radio frequency signal comprising:

(a) a storage medium that stores data reflecting the magnetic resonance radio frequency signal;

(b) a waveform generator, wherein the waveform generator uses data reflecting the magnetic resonance radio frequency signal to generate a waveform; and

(c) a signal transmitter that transmits the waveform to a magnetic resonance scanner.

12. The apparatus of claim 11, wherein the storage medium is random access memory, a magnetic storage medium, or an optical disk.

13. The apparatus of claim 11, wherein the waveform generator comprises a control device.

14. The apparatus of claim 13, wherein the control device is a computer.

15. The apparatus of claim 11, wherein the waveform generator comprises a base-band or intermediate frequency generator and modulator, or a digital frequency synthesizer.

16. The apparatus of claim 11, wherein the signal transmitter is an antenna or cable.

17. The apparatus of claim 11, further comprising a magnetic resonance scanner.

18. The apparatus of claim 11, further comprising a monitoring device that records operating parameters of a magnetic resonance scanner or free induction decay signals in the storage medium.

19. The apparatus of claim 18, wherein the monitoring device is a digital or analog signal recorder.

20. An apparatus for transmitting a waveform reflecting a magnetic resonance imaging signal comprising:

(a) a waveform generator, wherein the waveform generator uses data reflecting the magnetic resonance imaging signal to generate a waveform having a time-varying property;

(b) a signal transmitter that transmits the waveform having the time-varying property; and

(c) a magnetic resonance scanner that receives the waveform and uses it to produce an image.

21. The apparatus of claim 20, wherein the waveform generator comprises a control device.

22. The apparatus of claim 21, wherein the control device is a computer.

23. The apparatus of claim 20, wherein the waveform generator comprises a base-band or intermediate frequency generator and modulator, or a digital frequency synthesizer.

24. The apparatus of claim 20, wherein the signal transmitter is an antenna or cable.

25. A method of transmitting a waveform reflecting a time-varying magnetic resonance radio frequency signal comprising:

(a) providing data reflecting the time-varying magnetic resonance radio frequency signal to a waveform generator;

(b) generating a waveform having a time-varying property based on the data reflecting the time-varying magnetic resonance radio frequency signal using the waveform generator; and

(c) transmitting the waveform having the time-varying property to a magnetic resonance scanner.

26. The method of claim 25, wherein the time-varying property is amplitude, frequency, or phase.

27. The method of claim 25, further comprising:

(d) storing data reflecting the time-varying MR RF signal.

28. The method of claim 25, further comprising:

(d) detecting the waveform having the time-varying property.

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29. The method of claim 25, further comprising:

(d) testing a receiving system of a magnetic resonance scanner.

30. The method of claim 25, further comprising:

(d) calibrating a receiving system of a magnetic resonance scanner.

31. The method of claim 25, further comprising:

(d) testing data processing algorithms of a magnetic resonance scanner.

32. The method of claim 25, further comprising:

(d) training operators of a magnetic resonance scanner.